

Recombinant RIPK1 (1-294) protein

Catalog No: 82099, 82699
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Source: Human

Buffer Contents: Recombinant RIPK1 (1-294) protein is supplied in 25 mM HEPESNaOH pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100 and 0.5 mM TCEP.

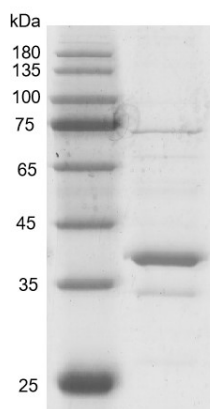
Background: **RIPK1** is a serine-threonine kinase which is a key regulator of TNF-mediated apoptosis, necroptosis and inflammatory pathways. Exhibits kinase activity-dependent functions that regulate cell death and kinase-independent scaffold functions regulating inflammatory signaling and cell survival. In normal conditions, **RIPK1** acts as an inhibitor of RIPK3-dependent necroptosis, a process mediated by RIPK3 component of complex IIb, which catalyzes phosphorylation of MLKL upon induction by ZBP1. Inhibits RIPK3-mediated necroptosis via FADD-mediated recruitment of CASP8, which cleaves RIPK1 and limits TNF-induced necroptosis. In addition to apoptosis and necroptosis, also involved in inflammatory response by promoting transcriptional production of pro-inflammatory cytokines, such as interleukin-6 (IL6). Phosphorylates RIPK3: **RIPK1** and RIPK3 undergo reciprocal auto- and trans-phosphorylation. Phosphorylates DAB2IP at 'Ser-728' in a TNF-alpha-dependent manner and thereby activates the MAP3K5-JNK apoptotic cascade.

Protein Details: Recombinant RIPK1 (1-294) protein that includes amino acids 1-294 of human RIPK1 protein (accession number NP_003795.2) was expressed in a baculovirus expression system, and contains an N-terminal His and FLAG tag. The molecular weight of the protein is 37.93 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for this product is shown.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

RIPK1 (1-294)



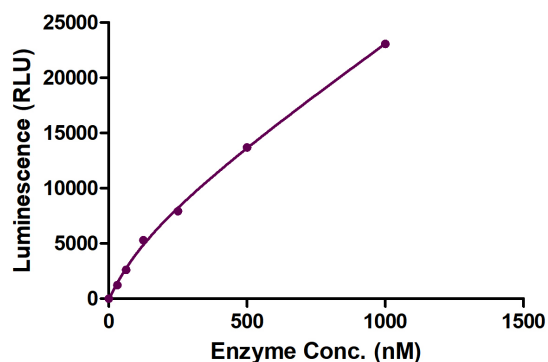
Recombinant RIPK1 (1-294) protein gel

10% SDS-PAGE with Coomassie blue staining

MW: 37.93 kDa

Purity: >90%

RIPK1 (1-294) Titration



ADP-Glo assay for RIPK1 (1-294) activity

0.2 $\mu\text{g}/\mu\text{l}$ Myelin Basic protein was incubated with different concentrations of RIPK1 (1-294) protein in a 10 μl reaction system containing 40 mM Tris-HCl pH 7.4, 20 mM MgCl_2 , 50 μM DTT, 0.1 mg/ml BSA and 10 μM ATP for 1 hour, then add 10 μl ADP-Glo Reagent for 1 hour. Then add 20 μl Kinase Detection Reagent incubates for 1 hour. All the operations and reactions were performed at RT. Finally, Luminescence measurement is collected by BMG.